

**STATE FOREST LAND
ENVIRONMENTAL CHECKLIST**

Purpose of Checklist:

2413699

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at <http://www.dnr.wa.gov> under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Timber Sale Name: Catwalk

Agreement # 30-084165

2. Name of applicant: Washington State Department of Natural Resources

3. Address and phone number of applicant and contact person:

Washington State Department of Natural Resources
South Puget Sound Region
950 Farman Avenue North
Enumclaw, WA 98022
(360) 825-1631
Contact: Jason Sharp

4. Date checklist prepared: 04/14/2009

5. Agency requesting checklist: Washington State Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):

- a. *Auction Date:* 02/23/2010
b. *Planned contract end date (but may be extended):* 10/31/2011
c. *Phasing:* None

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Timber Sale

- a. *Site preparation:* None
- b. *Regeneration Method:* Hand planted within two years following timber harvest.
- c. *Vegetation Management:* None currently planned; surveys will be conducted approximately 3-8 years following harvest to monitor the need for vegetation management.
- d. *Thinning:* Surveys to determine the need for pre-commercial thinning (PCT) will be conducted at approximately 12-15 years following planting to assess need for pre-commercial thinning (PCT). Commercial thinning will be considered from 23-45 years following planting.

Roads: Road maintenance will be conducted when necessary to ensure compliance with Forest Practices Rules.

Rock Pits and/or Sale: Rock may be obtained from any commercial source, or the State owned 5050 Rock Pit.

2413699

Other: None

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- ☐ 303 (d) – listed water body in WAU: ☐ temp ☐ sediment ☐ completed TMDL (total maximum daily load):
☐ Landscape plan:
☒ Watershed analysis: Tolt watershed analysis dated February 1, 1993
☐ Interdisciplinary team (ID Team) report:
☒ Road design plan: dated 6/01/09
☒ Wildlife report: Release of unsuitable marbled murrelet habitat memo, dated 2/5/09
☒ Geotechnical report: dated October 14, 2009
☐ Other specialist report(s):
☐ Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):
☒ Rock pit plan: included in the Road Plan, dated 6/01/09
☒ Other:

TRAX
Policy for Sustainable Forestry (PSF)
Soil Survey
Forest Resource Inventory System (FRIS)
WA Department of Fish and Wildlife's (WDFW) Priority Habitat and Species (PHS) database
RMAP # R240027
DNR Habitat Conservation Plan (HCP), dated 1997
North Puget Planning Unit Marbled Murrelet Reclassified Habitat Model map, dated 2/5/09

Referenced documents may be obtained from the South Puget Sound Region office in Enumclaw for review during the SEPA comment period.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known

10. List any government approvals or permits that will be needed for your proposal, if known.

☐ HPA ☐ Burning permit ☐ Shoreline permit ☒ Incidental take permit ☒ FPA ☒ Other: Board of Natural Resources

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. *Complete proposal description:*

The Catwalk proposal is composed of 4 variable retention harvest units with legacy trees, rock pit expansion harvest unit and associated road right of way, totaling approximately 62 net acres. This proposal is expected to yield approximately 3,484 MBF of merchantable timber. This variable retention harvest has approximately 655 marked leave trees. These leave trees are marked in 17 groups and 100 individually marked scattered leave trees. This amounts to an average of 10 leave trees per acre. The leave tree groups range in size from 0.13 acres up to 0.60 acres. Leave tree groups were located to maintain unique features within the stand including concentrations of large down woody debris, large diameter Douglas fir and western red cedar trees, seasonally wet areas, Type 5 waters, moist compactable soils, and to retain areas for structural and species diversity. The most wind-firm, dominant Douglas firs, western red cedars and occasional black cottonwood/big leaf maple and western hemlocks were marked as scattered leave trees.

There is approximately 2,657 feet of optional road construction. This optional construction will be abandoned prior to the termination of the contract, if constructed. There is approximately 24,063 feet of required pre-haul maintenance. Pre-haul maintenance will consist of cleaning the inlets and outlets of culverts and the installation of three new permanent cross drain culverts. Optional road construction includes the installation of seven temporary cross drain culverts.

There is one existing rock pit that could be expanded as a result of this proposal. The 5050 Pit could be expanded by 1/4 to 1/2 acre which will include approximately 1/3 acre of timber removal.

b. *Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.*

The current stand is approximately 75 years old, originating from natural regeneration following timber harvest in the 1930s. The stand condition consists of mature Douglas fir, western hemlock, and western red cedar with some red alder and other hardwoods. A few pockets of root rot were identified throughout the stand, creating dead and downed trees. The area is primarily site class II soils with an elevation range of 850 feet to 1,150 feet and a site index of 134. Timber harvest will be done by machine or hand falling. Tracked ground based yarding equipment may be used on slopes less than or equal to 30 percent and cable yarding on slopes greater than 30 percent. Within two years after harvest the site will be reforested with Douglas fir and western red cedar.

The desired future stand objectives are a mix of regenerating conifers amidst scattered large legacy and wildlife trees, while providing revenue for the trust beneficiaries. The legacy and wildlife trees were chosen for their size and wind firmness and will consist primarily of dominant Douglas fir with occasional western hemlock, and western red cedar in order to maintain species diversity in the over story.

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		2,657	0.75	
Reconstruction				
Abandonment				
Bridge Install/Replace				

Culvert Install/Replace (fish)				
Culvert Install/Replace (no fish)	10*			

* There are 9 eighteen inch culverts and 1 twenty-four inch culvert.

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. (See timber sale map available at DNR region office, and/or color landscape/WAU map on the DNR website <http://www.dnr.wa.gov> under "SEPA Center.")

a. Legal description:

T26N R8E S17
T26N R8E S18
T26N R8E S20

b. Distance and direction from nearest town (include road names):

This proposal is best accessed from Highway 203 starting approximately 2.5 miles northwest of Carnation. Turn right on Stillwater Hill Road that turns into Kelly Road for approximately 3.2 miles. Turn right on Stossel Creek Road and travel 1.5 miles to the end of the pavement. Travel north on the gravel road (Stossel Creek Road) for another 1.1 miles then turn right to gate number 1001 (5000 Road). Travel east on the 5000 Road for 2.9 miles to the start of Unit 4. Travel another .1 miles to the start of Unit 3. Travel another .2 miles to the start of Unit 2. Travel another .3 miles to the start of Unit 1. Continue traveling another .6 miles to the intersection of the 5000 Road and the 5050 Road. Go left on the 5050 Road for .3 miles to the 5050 Rock Pit.

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website <http://www.dnr.wa.gov> under "SEPA Center.")

WAU Name	WAU Acres	Proposal Acres
TOLT	63,743.1	62

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website <http://www.dnr.wa.gov> under "SEPA Center" for a broader landscape perspective.)

The Catwalk proposal is located on DNR managed land within the Marckworth State Forest and is managed under DNR's HCP and Policy for Sustainable Forests (PSF). The proposal is located in the Tolt Watershed Administrative Unit (WAU). This WAU has mixed forestland ownership and scattered residences. (See the WAU and adjacency maps on the DNR's website under SEPA Center for this proposal.) Please see the tables below for information regarding DNR's management within the WAU. Approximately 10 trees per acre of the current stand will remain on site, including trees from the largest dominant crown class and the largest diameter class. They have been left aggregated and dispersed throughout the sale. These trees will help provide a secondary canopy layer adding more vertical diversity. Large woody debris on the forest floor is not abundant in this area but will increase over time due to these leave trees, as some will blow down others will have their tops broken out.

Future forestry activities within the Tolt WAU include timber harvesting, road construction/maintenance, and silviculture activities. These activities have in the recent past and will continue to follow the HCP, Policy for Sustainable Forests (PSF), and Forest Practice Rules. This will ensure that all components of the environment are protected and minimize the chance of adverse impacts. There is a completed Watershed Analysis for the Tolt WAU though the five year update is incomplete. Currently the DNR has no other pending Forest Practice applications within the Tolt WAU.

Name of WAU, Sub-basin	Total Acres	Percent DNR Managed Forest land	DNR Managed Forested Acres	Non-DNR Managed Forested Acres	Percent Non-DNR Managed Forest Land	Proposal Acres
Tolt (070415)	63,743	15%	9,548	54,195	85%	62
Sub-basin (07041504)	4,224	65%	2739	1,485	35%	62

* Information obtained April 15, 2009

FOREST PRACTICE APPROVED APPLICATIONS FOR HARVEST ACTIVITIES

Harvest Type	Acres on DNR Land	Acres on Non-DNR Land	Acres on All Lands	Future harvest expectations within the next 2 years (DNR Land)
Even age	1,073	10,203	11,276	80
Uneven age	0	616	616	0
Salvage	0	40	40	0

*Information obtained April 15, 2009

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (check one):

☐ Flat, ☐ Rolling, ☒ Hilly, ☐ Steep Slopes, ☐ Mountainous, ☐ Other:

2413699

- 1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The Tolt WAU contains rolling mountainous terrain. The climate is similar to other locations along the foothills of the western Cascades with elevations ranging from 800 to 4,000 feet. The topography is generally the result of glacial action during the last ice age with recent erosion features from stream action. Most of the WAU (approximately 55 percent) is in the slope range of 0 – 30 percent; 28 percent is in the slope range of 31 to 65 percent; 1 percent is in the 65 to 100 percent range; and 16 percent has slopes in excess of 100 percent. The climate is generally moderate with precipitation range of about 35 to 80 inches per year. Temperature in Fahrenheit ranges from about the low 20's in the winter to the 90's in the summer. The major timber type is Douglas fir/western hemlock.

- 2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

There is little difference between the proposal location and the general description of the WAU with the exception of the specific location of the proposal area. The elevation of the proposal area ranges from 850 to 1,150 feet and slopes range from 5-75 percent.

- b. What is the steepest slope on the site (approximate percent slope)?

75 percent on approximately 3 percent of the sale area.

- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
6825	GRAVELLY LOAM	30-65	40	LOW	MEDIUM
6824	GRAVELLY LOAM	8-30	22	INSIGNIFICANT	MEDIUM

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

- 1) Surface indications:

There are two separate potentially unstable areas that were identified by the geologist and excluded from the harvest boundary. The first area is a bedrock hollow with the potential to deliver sediment to North Fork Creek if a failure were to occur. The second area includes a series of three small bedrock hollows with approximately 200 feet of horizontal run out below. This was determined by the geologist to have a minimal potential to deliver sediment to North Fork Creek due to the extensive length of slope below the features and the low-gradient bench between the base of the slope and the channel.

There are four additional sites that were evaluated as a result of further site analysis of features within the Tolt Watershed Analysis mass wasting units. Two of these sites are protected by leave trees within the proposed harvest units. See geotechnical report, dated October 14, 2009 for further details.

- 2) Is there evidence of natural slope failures in the sub-basin(s)?

☐ No ☒ Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:

Yes, shallow-rapid and deep-seated landslides are common along trough valley walls, terrace slopes, and delta fronts. The landslides generally occur due to high pore water pressures (saturated soils) and steep slope gradients in the permeable sediments overlying ground water perching silts and clays.

- 3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?

☐ No ☒ Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:

Associated management activity:

Some of the landslides found within the WAU are attributed to forest practice activities. There are places within the WAU where shallow rapid failures have occurred due to railroad grade construction in the 1930s through streams without adequate drainage. This has caused accelerated sedimentation over the last sixty years as the streams have been actively cutting through the fills. Roads constructed without adequate drainage or drainage that became obstructed have been identified as causes of shallow rapid failures. For ease of construction, road builders historically located roads on terrace slopes and large rotational slumps that could have been deep seated landslides. With roads located in these areas, it is difficult to determine whether slope failures (deep seated) were natural and existed prior to road construction or were the result of the road construction.

- 4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?

☒ No ☐ Yes, describe similarities between the conditions and activities on these sites:

- 5) Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.

The two potentially unstable areas described above have been removed from the harvest area. Culverts on haul roads will be cleaned to ensure proper drainage. Harvest operations may be suspended during wet weather, if in the opinion of the Contract Administrator, the operation poses a threat to public resources.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Approx. acreage new roads: 0.75 Approx. acreage new landings: 0.75-1.0 Fill source: 5050 Rock Pit

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

There is always some potential that erosion could occur as a result of the timber harvesting, yarding, road construction and hauling, but prudent road construction, logging and road maintenance techniques will minimize this. Culverts and ditches have been constructed to control surface water flow and redistribute water to the forest floor. The residual leave trees and vegetation will also prevent erosion related to runoff.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

All new roads will cover approximately 1 percent of the proposal area with impervious rock surfacing.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

Falling, yarding, timber haul, road construction and rock haul will not be permitted from November 1 to April 30, unless authority to do so is granted, in writing, by the Contract Administrator. If permission is granted to operate between November 1 and April 30, the Purchaser may be required to provide a "Closed Season Plan" to include further protection of water, soil, roads and other forest assets. The "Closed Season Plan" must be approved in writing by the Contract Administrator. In addition, road construction and rock haul will not be permitted on weekends or state recognized holidays. Falling, yarding and timber haul will be suspended during periods of wet weather, if in the opinion of the Contract Administrator the operation poses a threat to public resources.

All road construction pioneering will be accomplished with a tracked excavator and landing debris will not be perched. The haul roads will be graded as needed to maintain road crown and drain evenly. Culverts and ditches will be cleaned to prevent clogging and overflow. Optional roads constructed for the proposal will be abandoned after timber harvest activities are complete. During harvesting, one end of all logs will be suspended while yarded.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust from truck traffic, rock mining, crushing or hauling, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Insignificant amounts of engine exhaust from logging equipment and dust on roads from log truck traffic.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map available at DNR region office, or forest practice application base maps.)*

There are multiple streams in the immediate vicinity of the proposal. See below table for types and protection. The only named water is North Fork Creek. All waters are within the Tolt WAU and eventually flow into the Tolt River.

a) Downstream water bodies:

All unnamed streams eventually flow into North Fork Creek and the Tolt River.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
North Fork Creek	1	1	200 feet
Stream	4	5	100 feet
Stream	5	7	30 foot equipment limitation zone

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

Streams that are within this proposal area were identified during the initial field reconnaissance. The stream typing was determined using resource information gathered from field visits. Field foresters reviewed and confirmed the stream types. Once the stream typing was confirmed, HCP buffers were applied. All timber will be felled away from these RMZs and equipment limitation zones (ELZs).

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.

☐ No ☒ Yes (See RMZ/WMZ table above and timber sale map available at DNR region office.)
Description (include culverts):

The proposed logging will occur up to the above listed buffer widths. Logging may occur up to the stream channel of the Type 5 streams within the harvest area. A 30 foot ELZ will minimize soil disturbance. Leave tree groups were placed around six Type 5 streams in order to help protect the integrity of the channel or seep.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
- None
- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (Include diversions for fish-passage culvert installation.)
☒ No ☐ Yes, description:
- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒ No ☐ Yes, describe location:
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒ No ☐ Yes, type and volume:
- 7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

Yes, the WAU sub-basin contains a small percentage of terrain that is highly susceptible to erosion. There is a mass wasting area on the slopes above North Fork Creek on the north side of the creek. The proposal has a low potential for eroded material to enter surface water due to the adequate stream buffers as to disperse water onto the forest floor and filter any sediment before reaching streams or wetlands.

- 8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐ No ☒ Yes, describe changes and possible causes:

Streams within the WAU have experienced accelerated aggradations in low gradient reaches that have acted as areas of deposition. Storm events have caused increased aggradations and scouring in some of the side channels within the sub-basins and coarse sediments have reduced pool depths and redirected the stream channels. In general, the stream systems currently contain excess fine sediments. This has occurred primarily from natural storm events.

- 9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☐ No ☒ Yes, explain:

Mass wasting and erosion potential as a result of the proposal area is very low. The proposal is located on stable ground and will have little or no effect on water quality. The proposal has adequate stream buffers that will disperse water onto the forest floor and filter any sediment before reaching streams or wetlands.

- 10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?
Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒ No ☐ Yes, describe:

The Tolt WAU has approximately 4.9 road miles per square mile.

- 11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.
☒ No ☐ Yes, approximate percent of WAU in significant ROS zone.
Approximate percent of sub-basin(s):

- 12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

- 13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☐ No ☒ Yes, describe observations:

There is evidence of debris flows in some of the stream channels in the Tolt WAU, which were probably initiated during peak flow events.

- 14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.

The likelihood of this proposal contributing to peak flow impact as viewed in conjunction with past, present and future proposals is minimal. Past sales in the Tolt WAU on DNR managed lands have totaled less than 200 acres annually. Limiting DNR sales to less than 100 contiguous acres will help reduce the potential of peak flow occurrences. Green up rules restricting adjacency of sales adds to the protection. Harvesting activities on privately owned lands within the watershed seem to be consistent with historic averages. Few adverse effects have been witnessed in conjunction with these activities and there is little reason to believe there will be adverse effects in the future.

- 15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☒ No ☐ Yes, possible impacts:

- 16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.

The current proposal, along with landscape level practices to maintain mature forest components, will not significantly contribute to peak water runoff beyond historic levels. The proposal is located on stable soils and includes adequate protection of the streams near the harvest units. The current guidelines for HCP implementation include several prescriptions that address the potential for peak flow impacts. There will be leave trees left on site to assist in soil protection and provide a natural seed source for the next stand of trees. Also, this area will be replanted within two years after harvest. This proposal also has an adequate number of drainage structures on the haul route. These structures will ensure ditch water is deposited on the forest floor and not allowed to flow directly into typed water or concentrate water in a single area.

b. Ground Water:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.
No
- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.
None
- 3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?
☒ No ☐ Yes, describe:
a) Note protection measures, if any.

c. Water Runoff (including storm water):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.
The source of run-off is mostly rainfall with a small percentage of snow melt. Surface water run-off will be collected where needed by road ditches and will be diverted by culverts onto the forest floor. Culverts are placed in adequate numbers and proper locations to prevent direct flow of these waters into live streams. Upon completion of harvest operations, water bars, if needed, will be constructed on the skid trails to control runoff. The remaining trees, vegetation, and topography will restrict surface water runoff. Water will be absorbed through the forest floor.
- 2) Could waste materials enter ground or surface waters? If so, generally describe.
It is unlikely that waste materials could enter ground or surface waters. No waste material will be disposed of on site. In the event of accidental discharge of waste materials, the RMZs protecting streams will prevent these materials from entering ground or surface waters.
a) Note protection measures, if any.
Proper materials for spill cleanup as a result of equipment operation will be required to be on site. No lubricants or chemicals will be disposed of on site. Buffers along streams and equipment limitation zones on all Type 5 streams also protect surface waters.

- d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

The hauling of forest products and other road use will be carefully monitored to protect road conditions and resources. The haul roads have been designed to a standard that will support logging operations. Their use as haul roads is limited by their capability to handle heavy haul traffic during periods of wet weather and freeze/thaw associated with cold weather. The following measures will be taken, when in the opinion of the Contract Administrator, there is a potential for road damage and/or sedimentation of surface waters through runoff from haul roads:

- The number of loads hauled may be limited during periods of inclement weather.
- Erosion control measures (straw bales, silt fencing, installation of cross drains, additional surfacing rock or other methods to prevent delivery of sediment to streams or minimize erosion) may be required during harvest operations.
- Haul may be suspended during periods of heavy precipitation.

4. Plants

a. Check or circle types of vegetation found on the site:

- ☒ deciduous tree: ☒ alder, ☒ maple, ☐ aspen, ☒ cottonwood, ☐ western larch, ☐ birch, ☐ other:
☒ evergreen tree: ☒ Douglas fir, ☐ grand fir, ☐ Pacific silver fir, ☐ ponderosa pine, ☐ lodgepole pine,
☐ western hemlock, ☐ mountain hemlock, ☐ Englemann spruce, ☐ Sitka spruce,
☐ red cedar, ☐ yellow cedar, ☐ other:
☒ shrubs: ☒ huckleberry, ☒ salmonberry, ☒ salal, ☒ other: Vine Maple
☐ grass
☐ pasture
☐ crop or grain
☒ wet soil plants: ☐ cattail, ☐ buttercup, ☐ bullrush, ☐ skunk cabbage, ☒ devil's club, ☐ other:

- ☐ water plants: ☐ water lily, ☐ eelgrass, ☐ milfoil, ☐ other:
☐ other types of vegetation:
☐ plant communities of concern

241 3699

- b. What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)

This proposal will reduce the acreage in the Tolt WAU of 75-80 year old Douglas fir, western hemlock and western red cedar by 62 acres. There will be approximately 10 trees per acre left on-site to retain structural diversity and remain in compliance with the HCP. This proposal will not have significant impact to the overall composition of the WAU.

- 1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: <http://www.dnr.wa.gov> under "SEPA Center.")

Unit 1: 16 year plantation to the west, 6 year plantation to the south, 75-80 year RMZ to the north and east.

Unit 2: 6 year plantation to the south, 75-80 year RMZ to the north, east and west.

Unit 3: 6 year plantation to the west, 75-80 year plantation to the north, south and east.

Unit 4: 10 and 6 year plantation to the west, 75-80 year plantation to the north, south and east.

Unit 5: Rock pit 70 year old stand in expansion area.

- 2) Retention tree plan:

The retention tree prescription for the stand includes leaving approximately ten trees per acre of the existing stand greater than 10 inches in DBH, consistent with the HCP and forest practices regulations while meeting stand objectives to maintain site productivity and ecological function. There are a total of 655 dominant and co-dominant leave trees marked. There are 17 leave tree groups and approximately 100 scattered leave trees throughout all units. Clumped leave tree areas are located around sensitive areas identified as potential areas for high soil compaction, seasonal wet areas, Type 5 streams, and areas having large amounts of woody debris. Reserve tree selection in both units was based on maintaining good stand growth, wind firmness, species diversity, and potential wildlife use.

This leave tree strategy was employed for four reasons: 1) to recruit future wildlife habitat and unique forest stand structure components, 2) to provide vertical, horizontal and species diversification within and under the future plantation, 3) to protect seasonally wet areas within the stand that contain a valuable large woody debris component and habitat for amphibians, 4) to protect the visual aspect of this proposal. These leave trees are a representative sample of those conifers found in the existing stand. This strategy also provides a biological legacy, protecting the ecological value in large woody structures, fungal communities, habitat, and coarse woody debris.

- c. List threatened or endangered plant species known to be on or near the site.

TSU Number	FMU ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Douglas fir and western red cedar will be planted within two years after completion of harvest activities.

5. Animal

- a. Circle or check any birds animals or unique habitats which have been observed on or near the site or are known to be on or near the site:

birds: ☒ hawk, ☐ heron, ☐ eagle, ☒ songbirds, ☐ pigeon, ☒ other: woodpeckers

mammals: ☒ deer, ☒ bear, ☐ elk, ☒ beaver, ☒ other: cougar, bobcat, coyote

fish: ☐ bass, ☒ salmon, ☒ trout, ☐ herring, ☐ shellfish, ☐ other:

unique habitats: ☐ talus slopes, ☐ caves, ☐ cliffs, ☐ oak woodlands, ☐ balds, ☐ mineral springs

- b. List any threatened or endangered species known to be on or near the site (include federal- and state-listed species).

TSU Number	FMU ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

- c. Is the site part of a migration route? If so, explain.

☒ Pacific flyway

☐ Other migration route:

Explain if any boxes checked:

Although part of the Pacific Flyway, no migrating waterfowl have been witnessed using the area.

- d. Proposed measures to preserve or enhance wildlife, if any:

- 1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.

This proposal conforms to all regulations under the 1997 DNR Habitat Conservation Plan (HCP). The HCP includes a number of strategies to enhance and preserve wildlife over time. Specific to this proposal is the riparian strategy (to conserve and protect habitat for species that are dependent on aquatic and riparian habitat) and quality leave tree retention (which may provide critical elements for upland species and preserve long term site productivity through the maintenance of forest processes). Retained trees are wind firm and well-formed dominant and co-dominant trees representing the original diversity of species.

In addition, individual species and tree types known to have high wildlife use have been retained. Trees with unique characteristics such as forked or damaged tops have been incorporated within many of the groups throughout the proposal area to provide current and future habitat for a variety of wildlife species including woodpeckers, sapsuckers, and cavity dwellers. Large hard snags and large soft snags with high evident use and cavities will also be retained, where possible.

Stream buffers and wetland buffers have been established. These buffers, while protecting the water quality of the streams and wetlands, will provide shelter and foraging areas for the wetland and riparian dependent species that are indigenous to the area.

Northern Spotted Owl- The Catwalk proposal area is located in a 75-80 year old naturally regenerated second growth stand of timber dominated by Douglas fir and western hemlock. The stand lacks large/old trees, multiple canopies, large snags and downed wood. This sale is not located in a landscape managed for Nesting, Roosting and Foraging or Dispersal Management and does not meet Young Forest Marginal habitat. This proposal is available for the full range of DNR silvicultural activities permitted under the Habitat Conservation Plan in compliance with PR 14-004-120 NORTHERN SPOTTED OWL MANAGEMENT (Westside).

Marbled Murrelet- This proposal is within the HCP North Puget Planning Unit, which has a reclassified Marbled Murrelet Habitat Model developed from a two year habitat relationship study. A small portion (less than 5 acres) and the adjacent stand were modeled as potential murrelet habitat. The trees in this proposal are young, lacking the decadence or maturity to have formed suitable murrelet platforms. The area has been evaluated for habitat and has been determined that no habitat exists in, next to or within 1/4 mile. There are no buffers or timing restrictions or other aspects of the procedure applied. This proposal is available for the full range of DNR silvicultural activities permitted under the Habitat Conservation Plan in compliance with Protecting Marbled Murrelet Habitat, PR 14-004-320.

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

None
- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.
 - 1) Describe special emergency services that might be required.

Department of Natural Resources, private and rural fire suppression resources. Emergency medical or air ambulance for personnel injuries. Hazardous material spills may require Department of Ecology and/or county assistance.
 - 2) Proposed measures to reduce or control environmental health hazards, if any:

Fire equipment will be required on site during the closed fire season. Operations will cease if relative humidity falls below 30 percent.
- b. Noise
 - 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Does not apply
 - 2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Logging, road maintenance and forest products hauling operations will create increased noise and will be limited to weekday daylight hours.
 - 3) Proposed measures to reduce or control noise impacts, if any:

None

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? (*Site includes the complete proposal, e.g. rock pits and access roads.*)

Timber production/forest management (Forestry) in the Forest Production District of King County and incidental recreation use.
- b. Has the site been used for agriculture? If so, describe.

No
- c. Describe any structures on the site.

None
- d. Will any structures be demolished? If so, what?

Does not apply

- e. What is the current zoning classification of the site?
Forest Production
- f. What is the current comprehensive plan designation of the site?
Forestry
- g. If applicable, what is the current shoreline master program designation of the site?
Does not apply
- h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
No
- i. Approximately how many people would reside or work in the completed project?
Does not apply
- j. Approximately how many people would the completed project displace?
Does not apply
- k. Proposed measures to avoid or reduce displacement impacts, if any:
Does not apply
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
The proposal is designed according to the guidelines established in the King County growth management plan and the Department of Natural Resources Policy for Sustainable Forests and Habitat Conservation Plan.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Does not apply
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Does not apply
- c. Proposed measures to reduce or control housing impacts, if any:
Does not apply

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?
Does not apply
- b. What views in the immediate vicinity would be altered or obstructed?

This proposal is located within the Marckworth State Forest. No residential views in the immediate area will be altered by this proposal. Occasional views from forest roads used for informal recreation will be slightly altered. Topography, leave tree groups, and riparian zones within the sale will serve to break up these altered views.
- 1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☒ No ☐ Yes, viewing location:
- 2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☒ No ☐ Yes, scenic corridor name:
- 3) How will this proposal affect any views described in 1) or 2) above?
Does not apply
- c. Proposed measures to reduce or control aesthetic impacts, if any:

The riparian management zones adjacent to streams and placement of the required leave tree groups will assist in easing visual or aesthetic impacts created by the harvest operations. Reforestation will also occur on the site within two years after harvest activities.

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
Does not apply
- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

- c. What existing off-site sources of light or glare may affect your proposal?

241 8699

None

- d. Proposed measures to reduce or control light and glare impacts, if any:

None

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

Informal recreation in the area includes hiking; fishing, hunting, mushroom picking, mountain biking and horseback riding.

- b. Would the proposed project displace any existing recreational uses? If so, describe:

The proposed activity will temporarily displace recreationists who use the area and mushroom picking may be reduced in portions of the proposal.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None known

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None

- c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

None

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

See timber sale vicinity map as well as question A-12-b

- 1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

No

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No, the nearest transit stop is approximately 6 miles away at the junction of the Stillwater Hill Road and the Big Rock Road near Duvall.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

None

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

There is approximately 2,657 feet of optional construction that will be abandoned, if constructed and 24,063 feet of required pre-haul maintenance. Pre-haul maintenance will consist of cleaning inlets and outlets of culverts and the installation of three permanent cross drain culverts. Optional road construction includes the installation of seven temporary cross drain culverts.

- 1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

There will be a short-term increase in traffic during the operating period for this proposal due to forest products and equipment hauling.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

None

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Peak traffic volumes will occur during the operating months. Up to 20 log truck trips per day could be possible. There will be no log truck traffic once the sale is completed.

2413699

- g. Proposed measures to reduce or control transportation impacts, if any:

No hauling of forest products on weekends or state recognized holidays. Signs will be posted to warn the public of truck traffic on the 5000 Road.

15. **Public Services**

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Wildfire would need a response from DNR and County Fire Department.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

None

16. **Utilities**

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

None

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None

C. **SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: Mark Thibo Date: 10-14-09
Mark Thibo, Assistant Region Manager

AEM 10-14-09